



## PATENT ABSTRACTS OF JAPAN

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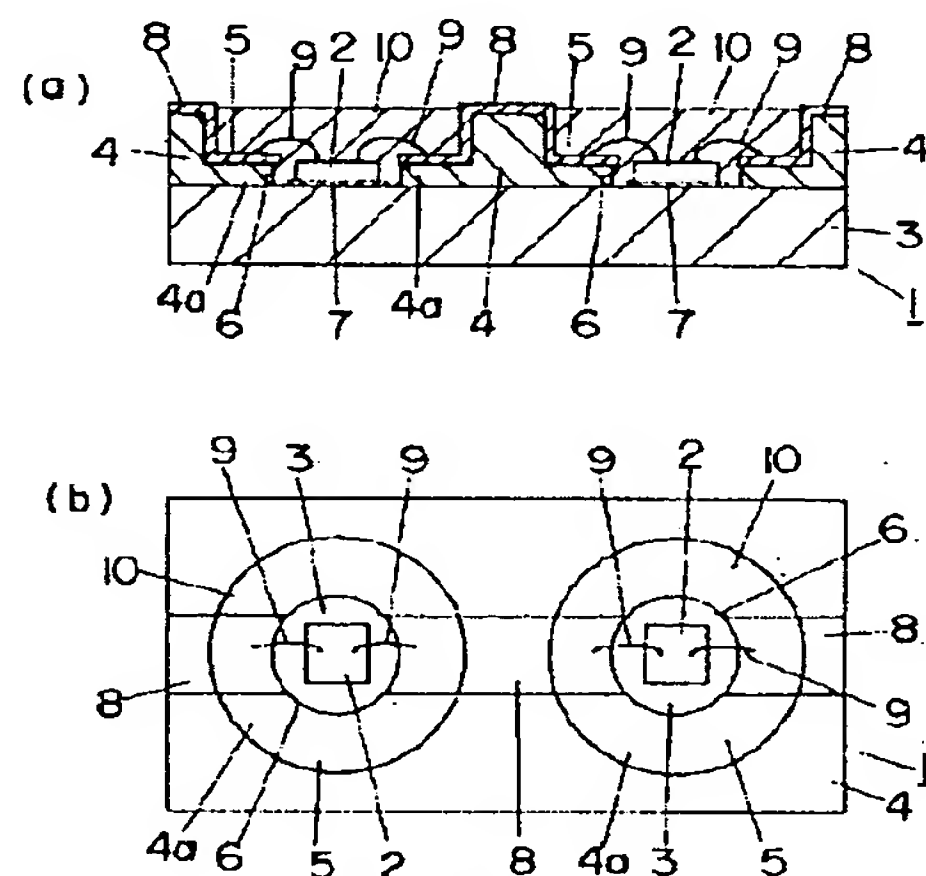
## (54) LIGHT SOURCE AND ITS MANUFACTURING METHOD

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## (57) Abstract:

**PROBLEM TO BE SOLVED:** To provide a light source and its manufacturing method which improves luminous efficiency to increase the optical power and prolong the life and raises the mechanical strength.

**SOLUTION:** The light source 1 comprises a board 3 having a thermal conductivity, an insulation member 4 bonded to one surface of the board 3, through-holes 6 passing through parts of the insulation member 4 facing the board 3, LED chips 2 mounted on exposed portions of the board 3 through the through-holes 6, expansions 4a inwardly projecting from the opening edges of the through-holes 6 at the board 3, a wiring pattern 8 provided on the insulation member 4 which electrically insulates the pattern 8 from the board 3, bonding wires 9 which electrically connect extending portions of the pattern 8 onto the expansions 4a to electrodes of the LED chips 2, and a translucent seal resin 10 filled in the through-holes 6 to seal the whole of the LEDs 2 and the bonding wires 9.



- 1 光源装置
- 2 LEDチップ
- 3 基板
- 4 絶縁部材
- 4a 突出部
- 6 貫通孔
- 8 配線パターン
- 9 ボンディングワイヤ
- 10 封止樹脂